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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,859

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Shih-Zheng Kuo

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EXAMINER

MCCOMMAS, BRENDAN N

ART UNIT

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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/662,859	Applicant(s) KUO, SHIH-ZHENG	
	Examiner BRENDAN MCCOMMAS	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 10-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/15/2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/20/2008 has been entered.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 16-19 and 22-24** are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (U.S. Patent Publication 7,034,969).

9. **Regarding claim 16**, Watanabe discloses everything claimed as applied above (see claim 15). In addition Watanabe discloses a method wherein defining one or more non-document regions in the sensing device, further comprises: defining a front region (J) in the sensing device according to a width of the document to be scanned, as disclosed in column 11, lines 63-66; and defining a post region in the sensing device according to the width of the document to be scanned, where the front region and the

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post region are adjacent to the effective region as disclosed in column 12, lines 9-15 and exhibited in figures 6A-B and figure 7.

10. **Regarding claim 17**, Watanabe discloses everything claimed as applied above (see claim 16). In addition Watanabe discloses a method further comprising sequentially reading data corresponding to the light detected in the front region and the effective region without reading data corresponding to the light detected post region, as disclosed in column 11, lines 63-67, and column 12 lines 1-20.

11. **Regarding claim 18**, Watanabe discloses everything claimed as applied above (see claim 16). In addition Watanabe discloses a method wherein generating a scanned image associated with the document (in this case film strip) further comprises discarding the data associated with the front region of the sensing device and not using it for imaging, as disclosed in column 11, lines 60-62; and processing data associated with the effective region of the sensing device to generate the scanned image, as disclosed in column 11, lines 63-64.

12. **Regarding claim 19**, Watanabe discloses everything claimed as applied above (see claim 16). In addition Watanabe discloses a method further comprising associating at least some data from a scan of the first portion (in this case a frame) of the document to data from a scan of a second portion (in this case another frame), of the document as disclosed in column 8, lines 16-21.

13. **Regarding claim 22**, Watanabe discloses everything claimed as applied above (see claim 15). In addition claim 22 is rejected for similar reasons as claim 15. Claim 22

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describes an apparatus and claim 15 describes the exact method implemented by the apparatus. Thus claim 22 is rejected.

14. **Regarding claim 23**, Watanabe discloses everything claimed as applied above (see claim 22). In addition claim 23 is rejected for similar reasons as claim 16. Claim 22 describes an apparatus and claim 16 describes the exact method implemented by the apparatus. Thus claim 23 is rejected.

15. **Regarding claim 24**, Watanabe discloses everything claimed as applied above (see claim 23). In addition claim 24 is rejected for similar reasons as claim 18. Claim 24 describes an apparatus and claim 18 describes the exact method implemented by the apparatus. Thus claim 24 is rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 1-3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashimizu (US Patent 6,040,923), in view of Iizuka (US Patent 6,721,009) further in view of Sakakibara et al. (United States Patent Publication 2003/0053157) hereinafter referenced as Sakakibara.

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17. **Regarding claim 1**, Takashimizu discloses a method, using an optical image reading apparatus, with an optical sensing device (40-1) used to scan an image line by line, and exhibited in figure 2, comprising: setting CCD reading width using, “a size sensor 44, which detects a paper size such as B5, A4, B4, and A3 from the width of the paper fed into the paper transfer path 20. Reading widths of the line CCDs 40-1 and 40-2 of the face reading unit 38-1 and back side reading unit 38-2 are set by this size detection using the paper width,” and reads on claimed step of, *“producing induced charges in an optical sensing device when scanning at least a first portion of a document (134), the optical sensing device having a front region, and effective region that corresponds to the scanned document, and a post region,”* where the ‘reading width’ in Takashimizu reads on the ‘effective pixel region’ which is set according to the document width, as disclosed in column 9, lines 20-30, and exhibited in Figures 2 and 13C.

18. Charge processing where, “The face reading unit 38-1 incorporates a line CCD 40-1, optically reads an image on the surface of the paper 18 passing a reading point 62 on the paper transfer path 20, converts the image into an electric signal, and finally generates image data based on the various image portions scanned,” and reads on claimed step of, *“processing the induced charges corresponding to the effective region to form at least a piece of an image associated with the document,”* as disclosed in column 8, lines 48-53.

19. Takashimizu discloses the image scanning method in columns 3-6 and the device is exhibited in figure 2. However Takashimizu fails to disclose the steps of,

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"fetching out the induced charges corresponding to the front region and the effective region, and transferring the induced charges corresponding to the post region produced when scanning the first portion to the front pixel region."

20. However the examiner maintains that it was well known in the art for the optical reading method disclosed in Takashimizu to, *"fetch out the induced charges corresponding to the front region and the effective region for the first portion, and transferring the induced charges corresponding to the post region produced when scanning the first portion to the front pixel region,"* as taught by Iizuka.

21. In a similar field of endeavor, Iizuka discloses a method of driving a solid state imaging device. In addition Iizuka discloses *"fetch out the induced charges corresponding to the front region and the effective region for the first portion, and transferring the induced charges corresponding to the post region produced when scanning the first portion to the front pixel region,"* as disclosed in column 13, lines 60-67 and column 14, lines 10-16.

22. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu to include *"fetching out the induced charges corresponding to the front region and the effective region for the first portion, and transferring the induced charges corresponding to the post region produced when scanning the first portion to the front pixel region,"* for the purpose of decreasing the effects of radiation on the solid state imaging device, as disclosed in Iizuka, column 3, lines 32-49.

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22. Takashimizu discloses the image scanning method in columns 3-6 and the device is exhibited in figure 2. However Takashimizu fails to disclose the steps of, *"shielding at least one of the front region or the post region of the optical sensing device from light when scanning the document and in the transfer step wherein the shielding inhibits an overflow of induced charges in the front region when scanning the second portion of the document."*

23. However the examiner maintains that it was well known in the art for the optical reading method disclosed in Takashimizu to, *"shielding at least one of the front region or the post region of the optical sensing device from light when scanning the document and in the transfer step wherein the shielding inhibits an overflow of induced charges in the front region when scanning the second portion of the document,"* as taught by Sakakibara.

24. In a similar field of endeavor, Sakakibara discloses an image inputting apparatus, and image forming apparatus using a four line CCD sensor. In addition Sakakibara discloses *"shielding at least one of the front region or the post region of the optical sensing device from light when scanning the document and in the transfer step wherein the shielding inhibits an overflow of induced charges in the front region when scanning the second portion of the document,* as disclosed in [0060], [0092]-[0093] and [0112].

25. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu to include *"shielding at least one of the front region or the post region of the optical sensing device from light when scanning the document and in the transfer step wherein the shielding inhibits an*

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overflow of induced charges in the front region when scanning the second portion of the document for the purpose of reading a certain size of paper with minimal defects, as disclosed in Sakakibara, [0060].

23. **Regarding claim 2**, Takashimizu and Iizuka disclose everything claimed as applied above (see claim 1). In addition Iizuka discloses a method wherein the front pixel region and the post pixel region are located at the two sides of the effective region, as disclosed in column 11, lines 34-45 and exhibited in figure 3B.

24. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu wherein the front pixel region and the post pixel region are located at the two sides of the effective region, for the purpose of decreasing the effects of radiation on the solid state imaging device, as disclosed in Iizuka, column 3, lines 32-49.

25. **Regarding claim 3**, Takashimizu and Iizuka disclose everything as applied above (see claim 1) in addition Takashimizu discloses in column 8, lines 49-50, that “the face reading unit incorporates 38-1 a line CCD 40-1” which reads on the “*optical sensing device comprising an optical charge coupled device (CCD)*.”

26. **Regarding claim 12**, Takashimizu and Iizuka disclose everything claimed as applied above (see claim 1). In addition Iizuka discloses the method which further comprises adding the data contained in the induced charges transferred from the post region to data read in the induced charges generated by the front region in the scan of

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the second (or next) portion, as disclosed in column 13, lines 60-67 and column 14, lines 10-16.

27. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu to include adding the data transferred from the post region to data generated by the front region in the scan of the second (or next) portion, for the purpose of decreasing the effects of radiation on the solid state imaging device, as disclosed in Iizuka, column 3, lines 32-49.

28. **Claims 10-11, and 13-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashimizu (US Patent 6,040,923), in view of Iizuka (US Patent 6,721,009) further in view of Watanabe (United States Patent 7,034,969).

29. **Regarding claim 10**, Takashimizu and Iizuka disclose everything claimed as applied above (see claim 1). However Takashimizu and Iizuka fail to explicitly disclose a method further comprising sequentially reading the induced charges corresponding to the front region and the effective region without reading the induced charges corresponding to the post region.

30. However it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the method of Takashimizu and Iizuka, to include the step of sequentially reading the induced charges corresponding to the front region and the effective region without reading the induced charges corresponding to the post region as taught by Watanabe.

31. In a similar field of endeavor Watanabe discloses a divided one-dimensional solid-state imaging device, method of controlling one-dimensional solid-state imaging

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device, and image reading apparatus and method using the same. In addition Watanabe discloses a method which includes the step of sequentially reading the induced charges corresponding to the front region and the effective region without reading the induced charges corresponding to the post region, as disclosed in column 11, lines 63-67, and column 12 lines 1-15.

32. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu and Iizuka to further comprise sequentially reading the induced charges corresponding to the front region and the effective region without reading the induced charges corresponding to the post region, for the purpose of reducing the time required to scan a photographic image, as disclosed in Watanabe, column 3, lines 30-38.

33. **Regarding claim 11**, Takashimizu, Iizuka and Watanabe disclose everything claimed as applied above (see claim 1). In addition Watanabe discloses a method where the induced charges corresponding to the effective region (region M) are processed to form at least the piece of the image associated with the document, further comprising discarding (and not using to create the image) the induced charges associated with the front region of the optical sensing device, as disclosed in column 11, lines 57-62 and column 12, lines 24-27.

34. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu and Iizuka to further comprise where the induced charges corresponding to the effective region (region M) are processed to form at least the piece of the image associated with the document, further

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comprising discarding (and not using to create the image) the induced charges associated with the front region of the optical sensing device, for the purpose of reducing the time required to scan a photographic image, as disclosed in Watanabe, column 3, lines 30-38.

35. **Regarding claim 13**, Takashimizu, Iizuka and Watanabe disclose everything claimed as applied above (see claim 1). In addition Watanabe discloses the method further comprising: determining at least another portion (a different frame) of the document (film strip) to be scanned; and scanning another portion of the document to determine at least another piece of the image associated with the document (film strip in this case), as disclosed in column 8, lines 8-21.

36. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu and Iizuka to further comprise determining at least another portion (a different frame) of the document (F) to be scanned; and scanning another portion of the document to determine at least another piece of the image associated with the document (F), for the purpose of reducing the time required to scan a photographic image, as disclosed in Watanabe, column 3, lines 30-38 and exhibited in figure 1.

37. **Regarding claim 14**, Takashimizu, Iizuka and Watanabe disclose everything claimed as applied above (see claim 13). In addition Watanabe discloses a second fine scanning step, further comprising generating the image associated with the document (film strip in this case) from pieces of the image formed from processing of the induced charges, as disclosed in column 8, lines 16-21.

39. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Takashimizu and Iizuka to further comprise a second fine scanning step, further comprising generating the image associated with the document (film strip in this case) from pieces of the image formed from processing of the induced charges, for the purpose of reducing the time required to scan a photographic image, as disclosed in Watanabe, column 3, lines 30-38 and exhibited in figure 1.

1. **Claim 15** is rejected under 35 U.S.C. 103(e) as being anticipated by Watanabe (U.S. Patent Publication 7,034,969) further in view of Sakakibara et al. (United States Patent Publication 2003/0053157) hereinafter referenced as Sakakibara.

2. **Regarding claim 15**, Watanabe discloses a divided one-dimensional solid-state imaging device, method of controlling one-dimensional solid-state imaging device, and image reading apparatus and method using the same. In addition Watanabe discloses a method comprising: detecting light with the sensing device when scanning at least a first portion of a document (in this case film strip, but it can be a document), the sensing device having an effective region that corresponds to at least a portion of the scanned document, and one or more non-document regions, as disclosed in column 3, lines 18-30 and column 11, lines 49-62; reading data corresponding to the light detected in the effective region of the sensing device without reading at least some data corresponding to light detected in at least one non-document region (section K) of the sensing device, as disclosed in column 12, lines 10-13; and generating a scanned image associated with the document, at least in part, from the data corresponding to the effective region of

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the sensing device, as disclosed in column 11, lines 58-62. However Watanabe fails to explicitly disclose the step of shielding at least one of the non-document regions of the sensing device from light when scanning the document, wherein the shielding inhibits overflow of induced charges in at least one of the non-document regions when scanning a second portion of the document.

3. However the examiner maintains that it was well known in the art for the optical reading method disclosed in Watanabe to, “shield at least one of the non-document regions of the sensing device from light when scanning the document, wherein the shielding inhibits overflow of induced charges in at least one of the non-document regions when scanning a second portion of the document.as taught by Sakakibara.

4. In a similar field of endeavor, Sakakibara discloses an image inputting apparatus, and image forming apparatus using a four line CCD sensor. In addition Sakakibara discloses “shielding at least one of the non-document regions of the sensing device from light when scanning the document, wherein the shielding inhibits overflow of induced charges in at least one of the non-document regions when scanning a second portion of the document”, as disclosed in [0060], [0092]-[0093] and [0112].

5. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Watanabe to include “shielding at least one of the non-document regions of the sensing device from light when scanning the document, wherein the shielding inhibits overflow of induced charges in at least one of the non-document regions when scanning a second portion of the document.for the

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purpose of reading a certain size of paper with minimal defects, as disclosed in Sakakibara, [0060].

40. **Claims 20-21 and 25-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (United States Patent 7,034,969) in view of Iizuka (United States Patent 6,721,009).

41. **Regarding claim 20**, Watanabe discloses everything claimed as applied above (see claim 19). However Watanabe fails to explicitly disclose the method wherein associating at least some data from the scan of the first portion of the document to data from the scan of the second portion of the document further comprises transferring the data from the scan of the first portion of the document corresponding to the post region of the front region of the sensing device for use during the scan of the second portion of the document.

42. However it would have been obvious to one of ordinary skill in the art at the time of the invention to include such a modification to the invention of Watanabe, as taught by Iizuka.

43. In a similar field of endeavor, Iizuka discloses a method of driving a solid state imaging device. In addition Iizuka discloses the method wherein associating at least some data from the scan of the first portion of the document to data from the scan of the second portion of the document further comprises transferring the data from the scan of the first portion of the document corresponding to the post region of the front region of the sensing device for use during the scan of the second portion of the document (in

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this case, the following scan line), as disclosed in column 13, lines 60-67 and column 14, lines 10-16.

44. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Iizuka to include associating at least some data from the scan of the first portion of the document to data from the scan of the second portion of the document further comprises transferring the data from the scan of the first portion of the document corresponding to the post region of the front region of the sensing device for use during the scan of the second portion of the document (in this case, the following scan line), for the purpose of decreasing the effects of radiation on the solid state imaging device, as disclosed in Iizuka, column 3, lines 32-49.

45. **Regarding claim 21**, Watanabe and Iizuka disclose everything claimed as applied above (see claim 20). In addition Iizuka discloses the method further comprising adding the data transferred from the post region to data generated by the front region in the scan of the second portion of the document (in this case the following scan line), as disclosed in column 13, lines 60-67 and column 14, lines 10-16.

46. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Iizuka to include adding the data transferred from the post region to data generated by the front region in the scan of the second portion of the document for the purpose of decreasing the effects of radiation on the solid state imaging device, as disclosed in Iizuka, column 3, lines 32-49.

47. **Regarding claim 25**, Watanabe and Iizuka disclose everything claimed as applied above (see claim 23). In addition claim 25 is rejected for similar reasons as

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claim 20. Claim 25 describes an apparatus and claim 20 describes the exact method implemented by the apparatus. Thus claim 25 is rejected.

48. **Regarding claim 26**, Watanabe and Iizuka disclose everything claimed as applied above (see claim 25). In addition claim 26 is rejected for similar reasons as claim 21. Claim 26 describes an apparatus and claim 21 describes the exact method implemented by the apparatus. Thus claim 26 is rejected.

Response to Arguments

49. Applicant's arguments filed 08/18/2008 have been fully considered and are moot on the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN MCCOMMAS whose telephone number is (571)270-3575. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward L. Coles/
Supervisory Patent Examiner, Art Unit 2625

/ Brendan N. MCommas/
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/B. M./

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